Miscellanea.

PURIFICATION AND SOFTENING OF WATER.—By means of a union of chemical and mechanical processes, patented by Mr. Horsley, of Ryde, Isle of Wight, chemist, it is proposed not only to purify water, as in filtration, but to soften it by the withdrawal of its sulphates or other 'hardening' salts, if not also to deprive it of all animal or vegetable impregnation, and thus to render it wholesome for human and animal use, and economical and useful for domestic purposes and for many processes of art and manufacture, as well as for the prevention of incrustation in steam and stove boilers, which arises chiefly from the deposit of the sulphate of lime during the evaporation of the water into steam. For this latter purpose, we remember, a patent was some time since taken out, under which sal-ammoniac was inserted into the boiler and became decomposed, the sulphuric acid of the incrustation uniting with the ammonia of the sal-ammoniac, and its lime with the muriatic acid forming a very deliquescent salt in place of the incrustation. It may be by some combination of an analogous process with the other means alluded to that Mr. Horsley's patent operates. And at all events, the idea is a very important one, and its realization most desirable, especially in localities where there is good reason to believe that calculous and other diseases are generated by hard or impure water.

RAILWAY GUARDS' AND BREAKSMEN'S FRIENDLY SOCIETY.—A numerous meeting of the guards and breaksmen of the various metropolitan railways was held lately for the purpose of establishing a "Railway Guards' Universal Friendly Society." The object in view is to provide a sick fund; a sum to the family of a member killed; a pension fund for disabled members; but especially a fund for relief of widows and orphans of deceased members. The society has been originated by the guards of the London and North-Western; and Mr. G. C. Glyn has given his earnest support to it, and become one of the trustees. Upwards of 1,000 guards and breaksmen have signified their willingness to become members. The preliminary rules and regulations were approved of, and the rates of weekly payment to recipients of relief are under the consideration of Mr. Neison, the actuary.

INSTITUTE OF GAS ENGINEERS.—We are informed by a correspondent that a new institute, or college, is about to be established, for the collection and discussion of all data relative to the manufacture, price, purification, and distribution of gas, and the best mode of regulating the supply, so that it may be conveyed to consumers at a cost much less than that at present charged, and on more consistent and equable terms than those anomalous and variable ones which still prevail throughout the country. The adaptation, if possible, of the many new and improved methods of manufacture to old works should also be considered, for behoof of those companies who find the expense of such adaptation a hinderance to their adoption. Another important object is the regular training and instruction of gas engineers, so as to reduce to one uniform system and science that diversity of modes which still prevails together with extravagant and ill-directed expenditure. The projectors of this new institute are said to be Professor Wilson, of the Andersonian University, Glasgow, and Mr. Angus Croll.

THE IRON TRADE.—Scarcely were the promising arrangements for a rise of workmen's wages, with an increase of nominal prices, *settled* at the quarterly meetings, when everything as usual has been unsettled again in the interim, by the lowering both of wages and of prices to their previous standard. This renewed exposure of the vain attempts to impose fictitious and impracticable prices at the quarterly meetings, has at length induced the *Times* and other of our contemporaries to confirm the truth of our repeated exposure of so hollow and unavailable a practice, by a declaration that they now perceive that "no dependance is apparently to be placed in the decision of quarterly meetings."

THE LATE MR. VERNON.—Our readers will hear with regret that Mr. Vernon has passed away from amongst us, before receiving any fitting acknowledgment of a nation's gratitude.

ECCLESIOLOGICAL LATE CAMBRIDGE CAMDEN SOCIETY.—The tenth anniversary meeting of this society was held on Thursday, May 10, in the school-room of Christ Church, St. Pancras, in Albany-street,—Mr. A. J. B. Hope, M.P., in the chair. The report read by the Rev. B. Webb, honorary secretary, stated that fifteen new members had been added to the society during the year, and that the rooms in Bond-street had not been found practically useful. It mentioned that the New York Ecclesiological Society had established a magazine, entitled the "New York Ecclesiologist," conducted with much ability and principle. Le Père Martin, a French ecclesiologist, read, in French, two short papers, one of them on the "Stone Chair," at Canterbury, to which he assigned no earlier date than the time of Cardinal Langton. A paper on the "Draining and Drying of Churches," was read by the Rev. B. Webb. The Rev. J. M. Neale, another of the secretaries, read a paper on "Ecclesiastical Ironwork," showing how village smiths might be taught to execute it, and exhibiting examples in proof.

NEW CHURCHES.—The number of additional churches erected during the last thirty years is variously estimated at from 1,000 to 1,400; the latter amount probably includes the whole number consecrated, many being churches rebuilt only. In the diocese of London, 161 new churches were consecrated (to 29th of July, 1847). In the diocese of Winchester, 155, of which 55 were rebuilt (to November, 1847). In the diocese of Lichfield, 135 new churches were consecrated (to October, 1847). In the diocese of Chester, during the twenty years it was held by the present Archbishop of Canterbury, 230 new churches were built.

RESTORATION OF BRIDGEWATER CHURCH COMPETITION.—On Monday in last week being the day appointed for receiving designs for the restoration and re-pewing of Bridgewater Church, nine were received by the vicar and churchwardens. The *Bridgewater Times* says, "we apprehend the next step will be to select from these, and we believe that if any difficulty should arise in the selection of a design, it is the intention of the vicar and churchwardens and the gentlemen nominated to co-operate with them in carrying out the work, to call in the assistance of an able architect wholly unconnected with the town and with the different competitors who have forwarded designs." The following are the mottoes attached to the various designs received: "Venerator Temporis Acti." "Nil sine magno vita labore dedit mortalibus." "Laus Deo." "Delectare in Domino." "Spe." "F." "A Cross." "A double triangle." "Suum cuique."

CONVERSAZIONE AT THE INSTITUTION OF CIVIL ENGINEERS.—On the 22nd, Mr. Field, the president of the institution, held his annual conversazione, and was efficiently assisted by Mr. C. Manby, the secretary, whose general arrangements, and distribution of the works of art and the models, claim praise. The visitors were very numerous, and the collection of works of art and science large. Mr. Thomas contributed a marble chimney-piece, intended for Mr. Peto, including in the design figures of Science and Art. Mr. Dighton's model of the Kneller Hall training school, designed by Mr. Mair, excited attention.

THE WORKING CLASSES.—On Tuesday, Mr. Slaney moved the appointment of a standing committee, or unpaid commission, to consider and report from time to time on practical measures (unconnected with political changes) likely to improve the condition of the working classes, to encourage their industry, and increase their contentment, but notice being taken that forty members were not present, the House was adjourned.

CRYSTALLIZATIONS ON NEW WALLS.—Sir,—In walls of old habitations, the nitrate of lime is formed from whence nitrate of potash is subsequently manufactured. Will some of your readers say, what is the efflorescent crystallization that forms so rapidly on walls of new houses long before they are fit for occupation? The taste is powerfully alkaline, generally sodaic. It is proposed to remedy the mischief of the latter by covering the surface affected with tin-foil, fixed to the place by copal varnish. N.

PROJECTED WORKS.—Advertisements have been issued for tenders,—by June 1st, for supplying and laying down about 1,800 yards of 3-inch tooled York paving, 1,100 yards of quarry-worked Purbeck curb, and 560 yards of quarry-worked carlinose, or Aberdeen curb; by 4th June, for building 800 feet of brick sewer, and 158 feet of glazed stone-ware pipe sewer, in the parish of St. Mary Abbots, Kensington; by 31st, for the erection of a Wesleyan chapel at Kingswinford; by 2nd June, for the erection of a warehouse at Salford; by 4th, for the construction and fitting up of pipes, &c., connected with the Hull baths and washhouses; by 29th inst., for the erection of school-houses at Norwood; by same date, for the maintenance of the permanent way of the Blackwall Railway; by 6th June, for the construction of the works of the Waterford and Kilkenny Railway from Thomastown to Knockwilliam, county Kilkenny; by 29th inst., for making 200,000 stock bricks at Buxton; by 30th, for painting and whitewashing the Ecclesall Union Workhouse; by 26th June, for the supply of 2,600 loads of English elm timber for the navy; by 7th, for repairing, repewing, and other works, at Westham Church, Essex; by 4th, for a gasholder and cast-iron tank for the Richmond Gas Company, also for the erection of a retort stack and setting 23 retorts for same; by 7th, for alteration and improvements to five houses at Poplar; by 1st, for paving and repairing carriage and footways of St. John's, Clerkenwell; by 31st inst., for the excavators', masons', and bricklayers' works, in erecting a large gas holder tank at Sheffield; by 31st, for taking up and repaving the High-street of Bridgnorth; by 5th June, for the performance of bricklayers', carpenters', masons', painters', paperhangers', paviers', plasterers', plumbers', and other works at Birmingham, Coventry, Weedon, Norththampton, Nottingham, Mansfield, Burslem, Newport, Brecon, and Carmarthen, for the Ordnance department.

EMPTY HOUSES IN LIVERPOOL.—An official return of the unoccupied houses in Liverpool, of a rental of 30*l.* and upwards, gives the extraordinary number of 5,900; and yet the population, it is said, has not decreased. Rents are beginning to fall; and a shop in Bold-street, which let for 120*l.* is now, says the *Manchester Guardian*, untenanted, though only 70*l.* is asked.

METHOD OF SOLDERING CAST-IRON WITH WROUGHT IRON.—The following process has been recommended for this purpose:—First melt filings of soft cast-iron with calcined borax in a crucible; then pulverize the black vitreous substance which is thereby produced, and sprinkle it over the parts which are intended to be united; after which, heat the pieces of cast and wrought-iron and weld them together on an anvil, using only gentle blows. This method is peculiarly applicable for the manufacture of iron articles which are intended to be made red hot, and are required to be impervious to fluids or liquids, as such a result cannot be obtained by simple fastening.—*Sheffield Times.*

SOMERSETSHIRE ARCHÆOLOGICAL AND NATURAL HISTORY SOCIETY.—A society bearing this title has been formed. Its objects are—the cultivation of, and collecting information on, archæology and natural history, in their various branches, but more particularly in connection with this county. One of the objects of the society is to collect, by donation or purchase, a library and museum, more particularly illustrating the history, natural, civil, and ecclesiastical, of the county of Somerset.

THE GYMNETRUS NORTHUMBRICUS.—A remarkable specimen of the *Gymnetrus* caught off the coast of Northumberland, is now exhibiting at the Cosmorama Rooms in Regent-street. Its form and the peculiar arrangement of the dorsal fin, lead its owners to exhibit it as coinciding with the description of the *sea serpent*. Those who go to see it as this hypothetical being will be disappointed: simply as a specimen of a rare and curious fish it is very interesting.

DUBLIN SCHOOL OF DESIGN.—Mr. M'Manus, who was so unceremoniously bowled out at Glasgow, as some of our readers will remember, has been appointed head master of the Government School of Design in Dublin, with full power to carry out the objects of the institution.

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